

REMARKS

The pending Office Action addresses claims 10, 12-14, 16, 17, 20, 24-44, 46-54, 56-64, 68, 71, 72, and 74-79, all of which stand rejected. Applicants initially note that claims 42, 46, and 47 appear to be incorrectly listed as pending as these claims were previously canceled. Reconsideration and allowance are requested in light of the amendments and remarks submitted herewith.

Amendments to the Claims

Applicants present the following claim amendments solely to expedite prosecution. These amendments should not be construed as Applicants' acceptance of the Examiner's rejection. Applicants reserve the right to prosecute any of the former claims in a continuing application.

Claims 10, 20, 38, 43, 51, 60, 74, and 75 are amended as shown on the attached sheets. Support for these amendments can be found throughout the application as filed, for example, in the original claims and at [0049]-[0051] of the published application. No new matter is added.

Objection Under 35 U.S.C. §§ 112 and 132

The Examiner objects to the amendment filed on October 15, 2009 pursuant to 35 U.S.C. 132(a) because it allegedly introduces new matter into the disclosure of the invention. The Examiner also rejects claims 10, 12-14, 16, 17, 20, 24-37, 60-64, 68, 71, 72, and 77 pursuant to 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner argues that the originally filed disclosure is silent on a "fluence in a range of about 0.01 J/cm² to about 0.5 J/cm²."

Applicants initially note that none of the claims to which the Examiner rejects contain the limitation of "fluence in a range of about 0.01 J/cm² to about 0.5 J/cm²." Rather, independent claim 10, for example, recites a source of EMR capable of delivering one or more pulses having a "fluence in a range of about 0.1 J/cm² to about **5 J/cm²**." [Emphasis added.] Additionally, each of claims 60, 71, and 72 recite a similar range.

The MPEP 2163.05 (III) provides:

With respect to changing numerical range limitations, the analysis must take into account which ranges one skilled in the art would consider inherently supported by the discussion in the original disclosure. In the decision in *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), the ranges described in the original specification included a range of “25%-60%” and specific examples of “36%” and “50%.” A corresponding new claim limitation to “at least 35%” did not meet the description requirement because the phrase “at least” had no upper limit and caused the claim to read literally on embodiments outside the “25% to 60%” range, *however a limitation to “between 35% and 60%” did meet the description requirement.* (Emphasis Added)

In the instant case, the specification discloses applying radiation to a treatment area “so as to expose the treatment area to a fluence in a range of about 0.1 J/cm² to about 1000 J/cm², or more preferably a fluence in a range of about 5 to about 50 J/cm².” [Para. 0016.] Thus, the originally filed specification is not silent on the claimed range. Rather, a fluence of about 5 J/cm² is the end point of the narrower range of about 5-50 J/cm² that falls within the range of about 0.1 J/cm² to about 1000 J/cm². Further, the Application provides in Example 1 a fluence (~ 1.5 J/cm²) that plainly falls within the recited range. [See para. 0085.] As such, the specification provides support for the “fluence in a range of about 0.1 J/cm² to about 5 J/cm².”

The Examiner also rejects claim 20 pursuant to 35 U.S.C. § 112, second paragraph, as being dependent on a canceled base claim. Claim 20 is amended to depend from independent claim 10, thereby rendering moot this objection.

Rejections Under 35 U.S.C. § 102

A. Rejections Based on Tankovich

The Office Action rejects claims 10, 12-14, 16, 17, 24-31, 33, 34, 36, 38-44, 46-54, 56-64, 68, 71, 72, and 74-79 pursuant to 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,162,211 of Tankovich *et al.* (“Tankovich”). Applicants initially note that claims 42, 46, and 47 were previously canceled.

1. Claim 10

Tankovich is generally directed to methods for removing and bleaching hair. [Abstract.] “The hair removal methods and hair bleaching methods include infiltrating a transparent fluid

with an index of refraction greater than that of skin tissue into hair ducts to help transmit the laser light down the hair ducts.” [Id.]

Tankovich does not disclose *selecting a pulse width, wavelength and fluence of electromagnetic radiation (EMR) to modify hair tips based on skin type or hair color*, the selected pulse width being in a range of about 1 microsecond to about 100 milliseconds, the selected wavelength being in a range of about 360 nm to less than 600 nm and the selected fluence in a range of about 0.1 J/cm² to about 5 J/cm² and *applying one or more pulses of the selected pulse width, wavelength, and fluence* so as to cause heating of at least a portion of the hair tips so as to modify a shape of at least a portion of the hair tips without removing the respective hairs and without damaging the skin underlying the hair tip. Rather, Tankovich is directed to a method for removing or bleaching hair. Indeed, Tankovich does not teach or even suggest the use of EMR to *modify a shape of at least a portion of the hair tips* without removing the respective hairs and without damaging the skin underlying the hair tip, and further, there is no recognition of selecting the treatment parameters based on skin type or hair color.

For at least these reasons, claim 10 distinguishes over Tankovich. Claims 12-14, 16, 17, 24-31, 33, 34, 36, and 37 are allowable over Tankovich at least because they depend, directly or indirectly, on claim 10.

2. Claim 38

Tankovich does not disclose *selecting a wavelength and pulse width of electromagnetic radiation to cause a change in elasticity of hair shafts based on skin type or hair color*, the selected wavelength being in a range of about 1350 nm to about 2700 nm and the selected pulse width being in a range of about 1 microsecond to about 100 milliseconds, and applying at least one electromagnetic pulse having the *selected wavelength and pulse width* to a skin treatment area so as to cause a change in elasticity of the hair shafts without removing the respective hairs. Rather, as discussed above, Tankovich is directed to a method for removing or bleaching hair, and there is no recognition of selecting treatment parameters based on skin type or hair color *to cause a change in elasticity of the hair shafts*.

For at least these reasons, claim 38 distinguishes over Tankovich. Claims 39-41, 43, 44, 48-50, and 71 are allowable over Tankovich at least because they depend, directly or indirectly, on claim 38.

3. Claim 51

Tankovich does not disclose *selecting a wavelength and pulse width of electromagnetic radiation based on skin type or hair color*, the selected wavelength being in a range of about 1200 nm to about 1400 nm and the selected pulse width being in a range of about 1 microsecond to about 100 milliseconds, and applying EMR pulses having the *selected wavelength and pulse width* to one or more follicles in a skin treatment area without removing the respective hairs. Rather, as discussed above, Tankovich is directed to a method for removing or bleaching hair, and there is no recognition of selecting treatment parameters based on skin type or hair color.

For at least these reasons, claim 51 distinguishes over Tankovich. Claims 52-54 and 56-59, and 72 are allowable over Tankovich at least because they depend, directly or indirectly, on claim 51.

4. Claim 60

Tankovich does not disclose *selecting a wavelength, pulse width, and fluence of electromagnetic radiation to decrease a curliness of hair based on skin type or hair color*, the selected wavelength being in a range of about 380 nm to less than 600 nm, the selected pulse width being in a range of about 1 microsecond to about 100 milliseconds, and the selected fluence being in a range of about 0.1 J/cm² to about 5 J/cm², and irradiating a plurality of hair follicles in a treatment area with radiation of the *selected pulse width, wavelength, and fluence* to decrease a curliness of at least a portion of said hairs without removing the hairs. Rather, as discussed above, Tankovich is directed to a method for removing or bleaching hair, and there is no recognition of selecting treatment parameters based on skin type or hair color to *decrease a curliness of the hairs*.

For at least these reasons, claim 60 distinguishes over Tankovich. Claims 61-64 and 68 are allowable over Tankovich at least because they depend, directly or indirectly, on claim 38.

5. Claim 74

Tankovich does not disclose *selecting a wavelength of EMR to modify a shape of hair tips based on skin type or hair color*, the selected wavelength being in a range of about 360 nm to less than 600 nm, and applying EMR of the *selected wavelength* to the skin treatment area to deposit energy in one or more hair tips in the area to raise the temperature of the hair tips to a range of about 50 to about 300°C so as to modify a shape of at least a portion of said hair tips without removing the respective hairs and without damaging the skin underlying the hair tip. Rather, as discussed above, Tankovich is directed to a method for removing or bleaching hair, and there is no recognition of selecting treatment parameters based on skin type or hair color to raise the temperature of the hair tips to a range of about 50 to about 300°C so as to *modify a shape of at least a portion of said hair tips and without damaging the skin underlying the hair tip*.

For at least these reasons, claim 74 distinguishes over Tankovich. Claims 75-79 are allowable over Tankovich at least because they depend, directly or indirectly, on claim 74.

B. Rejections Based on McDaniel

The Office Action rejects claims 10, 12-14, 16, 17, 24-28, 60-64, and 74-79 pursuant to 35 U.S.C. § 102(e) as being anticipated by U.S. Application Pub. No. 20030023283 of McDaniel (“McDaniel”).

1. Independent Claim 10

McDaniel is directed to “a method for stimulating hair growth in which the hair growth structure is exposed to a source of electromagnetic radiation having a dominant emissive wavelength from about 390 nm to about 1600 nm.” Para. [0012]. “Photostimulating the hair growth structure is then performed by maintaining the exposure of the hair growth structure to

the source of electromagnetic radiation for a clinically effective duration and at a clinically effective light intensity.” *Id.*

McDaniel does not disclose *selecting a pulse width, wavelength and fluence of electromagnetic radiation (EMR) to modify hair tips based on skin type or hair color*, the selected pulse width being in a range of about 1 microsecond to about 100 milliseconds, the selected wavelength being in a range of about 360 nm to less than 600 nm and the selected fluence in a range of about 0.1 J/cm² to about 5 J/cm² and *applying one or more pulses of the selected pulse width, wavelength, and fluence* so as to cause heating of at least a portion of the hair tips so as to modify a shape of at least a portion of the hair tips without removing the respective hairs. Rather, McDaniel is directed to a method for stimulating hair growth, and there is no recognition of selecting treatment parameters based on hair color or skin type to *modify a shape of at least a portion of the hair tips and without damaging the skin underlying the hair tip*.

For at least these reasons, claim 10 distinguishes over McDaniel. Claims 12-14, 16, 17, 20, 24-28 are allowable over McDaniel at least because they depend, directly or indirectly, on claim 10.

2. Independent Claim 60

McDaniel does not disclose *selecting a wavelength, pulse width, and fluence of electromagnetic radiation to decrease a curliness of hair based on skin type or hair color*, the selected wavelength being in a range of about 380 nm to less than 600 nm, the selected pulse width being in a range of about 1 microsecond to about 100 milliseconds, and the selected fluence being in a range of about 0.1 J/cm² to about 5 J/cm², and irradiating with radiation of the *selected wavelength, pulse width and fluence* so as to decrease a curliness of at least a portion of the hairs without removing the hairs. Rather, McDaniel is directed to a method for stimulating hair growth, and there is no recognition of selecting treatment parameters based on hair color or skin type to *decrease the curliness of at least a portion of the hair tips*.

For at least these reasons, claim 60 distinguishes over McDaniel. Claims 61-64 are allowable over McDaniel at least because they depend, directly or indirectly, on claim 60.

3. Independent Claim 74

McDaniel does not disclose *selecting a wavelength of EMR to modify a shape of hair tips based on skin type or hair color*, the selected wavelength being in a range of about 360 nm to less than 600 nm, and applying EMR of the *selected wavelength* to raise the temperature of the hair tips to a range of about 50 to about 300°C so as to modify a shape of at least a portion of the hair tips without removing the respective hairs and without damaging the skin underlying the hair tip. Rather, McDaniel is directed to a method for stimulating hair growth, and there is no recognition of selecting treatment parameters based on hair color or skin type, and there is no recognition of selecting treatment parameters based on skin type or hair color to raise the temperature of the hair tips to a range of about 50 to about 300°C so as to *modify a shape of at least a portion of said hair tips*.

For at least these reasons, claim 74 distinguishes over McDaniel. Claims 75-79 are allowable over McDaniel at least because they depend, directly or indirectly, on claim 74.

Rejections Under 35 U.S.C. 103(a)

The Examiner rejects claims 10, 12-14, 16, 17, 20, 24-41, 42-44, 46-54, 56-64, 68, 71, 72, and 74-79 pursuant to 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,273,884 of Altshuler et al. (“Altshuler”) in view of McDaniel or Tankovich. Applicants initially note that claims 42, 46, and 47 are improperly rejected pursuant to 35 U.S.C. § 103(a) as these claims were previously canceled.

The Examiner alleges that “Altshuler teach a device and method as claimed except for the particular pulse widths, fluences, and wavelengths a billionth of a nanometer different from the claimed ranges.” The Examiner thus relies on McDaniel and Tankovich for the teaching of the treatment parameters and argues that it would have been obvious to one ordinary skill in the art “to employ the pulse widths and fluences of McDaniel (‘283) or Tankovich (‘211) in the device and method of Altshuler et al”

Altshuler discloses applying radiation wavelengths, e.g., in a range of 600-1200 nm, to heat the skin and/or at least part of hair follicles, e.g., the hair bulb. *See* col. 5, lines 61-62; col. 11, lines 35-36; col. 12, lines 26-28. Altshuler does not bridge the deficiencies of McDaniel and Tankovich as discussed above with respect to independent claims 10, 38, 51, 60, and 74.

For at least these reasons, independent claims 10, 38, 51, 60, and 74 distinguish over the combination of Altshuler in view of Tankovich or McDaniel. Claims 12-14, 16, 17, 20, 24-37, 39-41, 43, 44, 48-50, 52-54, 56-59, 61-64, 68, 71, 72, and 75-79 are allowable at least because they depend, directly or indirectly, on an allowable base claim.

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully request reconsideration and allowance of the application.

In the event that the remarks are not deemed to overcome the grounds for rejection, Applicants kindly request a telephonic interview to discuss the remaining issues. In such case, the Examiner is kindly requested to telephone the undersigned representative at the earliest convenience

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 141449, under Order No. 105090-230.

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